

"It [MPK: the study] had its origin in 1939, when I was associated with the Cross-Cultural Survey at the Institute of Human Relations, Yale University. While studying there I was privileged to get considerable exposure to the cross-disciplinary approach to the problems of culture and behavior which was, and still is, being emphasized at the Institute, especially [sic] by Drs. Murdock, Hull, Dollard, Miller, Ford, and Whiting.

As I continued my anthropological studies, it became more and more apparent to me, as to others, that a science of culture and behavior was most apt to arise from the application of techniques, methods, and approaches of several scientific disciplines concerned with human behavior—particularly social anthropology, sociology, psychology, and psychoanalysis—to specific problems. Consequently, in casting around for a subject on which to carry out field work, I began to search for one that would be especially adaptable to cross-disciplinary treatment.

While studying at the Institute of Human Relations, I became keenly aware of the significant role played by such basic drives as hunger, thirst, pain, and sex, in forming, instilling, and changing habits. Because of the difficulty of studying human behavior under laboratory conditions, our knowledge about the processes of learning has been derived largely from experimental studies of animals. However, the procedure, successfully employed in psychological experimentation, of depriving animals of food suggested that it might be possible to gain further insight into the relationship between the principles of learning and cultural forms and processes by studying a group of perennially

hungry human beings. It was logical to assume that where the conditions of a sparse and insecure food supply exist in human society the frustrations and anxieties centering around the drive of hunger should have significant repercussions on behavior and on cultural forms themselves. Hence, I took as my general problem the investigation of the relation between the economic aspect and other aspects of culture in a society functioning under conditions of a sparse and insecure food supply. More specifically, the problem resolved itself into determining, if possible, the effect of a more or less constant frustration of the hunger drive on such cultural forms as diet, food taboos, eating habits, dreams, antagonisms, magic, religion, and sex relations, and upon such cultural processes as integration, mobility, socialization, education, and change.

In our own society there are many individuals who suffer from lack of food, but one rarely finds hunger as a group phenomenon. For this reason a primitive society, the Siriono of eastern Bolivia, was chosen for study. The Siriono were selected for several reasons. In the first place, they were reported to be seminomadic and to suffer from lack of food. In the second place, they were known to be a functioning society. In the third place, the conditions for study among them seemed favorable, since it was possible to make contact with the primitive bands roaming in the forest through an Indian school which had been established by the Bolivian Government in 1937 for those Siriono who had come out of the forest and abandoned aboriginal life."

"To my teachers at Yale University I owe a profound debt of gratitude, especially to Dr. G. P. Murdock, who has been a friendly adviser since the beginning of the study. Dr. Murdock spent many hours patiently reading, criticizing, and editing much of the original manuscript. While living with the Siriono, I also had the benefit of his counsel, together with that of the late Dr. Bronislaw Malinowski, Dr. Clark Hull, and Dr. John Dollard, all of whom formed an advisory committee at Yale. These gentlemen were largely responsible for developing my interest in certain problems of this research, and all of them sent me many stimulating letters of advice and criticism while I was in the field. None of them is responsible for any of its defects."

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Siriono

"I wish to express my deepest appreciation to Dr. Alfred Métraux. It was he who was largely responsible for crystallizing my interest in the South American Indian and for my selection of the Siriono among whom to work. Dr. Métraux took a keen interest in this study from its inception and gave me constant encouragement while I was in the field."

"Siriono society presents any number of important anthropological problems, only a few of which can be mentioned here. Having presented in the foregoing sections a few of the descriptive data about the nature of Siriono society, I should like especially to include a few closing remarks, based on the Siriono data, about the problem of hunger frustration and its relation to culture. In this discussion, I propose ultimately to suggest a number of broad generalizations about the relationship between intense hunger frustration and habits and customs that perhaps can and should be tested in other societies where similar conditions exist. It is beyond the scope of this paper to deal with this matter cross-culturally. Before turning to a consideration of this problem, however, it will be necessary to clarify a number of concepts."

"Physiologists and psychologists are now agreed that the human organism is stimulated to behave by what are known as drives. These drives are the motivating states of an organism. They are of two kinds; primary (basic or innate) and secondary (derived or acquired). The primary drives are those which result from the normal biological processes and recur at more or less regular intervals, such as hunger, thirst, sex, fatigue, and pain. (8) These are found in all human beings. Secondary drives, on the other hand,

8. For a list of primary drives, see Murdock, 1945, pp. 127-128.

are learned drives. They are the motivations which result from particular cultural situations. The secondary drives, of course, are based on the primary drives and are supported by the satisfaction of them. But unlike primary drives they are not universally the same. There are doubtless some secondary drives, like prestige and appetites, that are found in all societies; but their intensities and definitions, at least, vary widely from person to person and from society to society. Among the ancient Romans, for example, food preferences were elaborated to a pronounced degree, while among the Siriono there is almost no expression of these secondary drives. Similarly, among the Indians of the northwest Pacific coast the drive for prestige is intense, while among the neighboring Eskimo this drive is but weakly developed. (9).

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9. For an excellent discussion of secondary drives, see Miller and Dollard, 1941, pp. 54-68. "

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Siriono

"While it is axiomatic that every society must reinforce or satisfy the basic drives of man in order to survive, up until recent times culture has been little studied from the point of view of the effect of basic drives upon it. We know from the ethnological literature now available that the drives of man are satisfied by almost as wide a variety of techniques as there are societies existing throughout the world. But ethnologists have focused most of their attention on describing the diverse habits and customs that exist in human societies and have laid little stress on the role played by basic drives in shaping them."

"Malinowski (10) was perhaps the first notable modern anthropologist to pay much heed

10. See, for example, Malinowski, 1939.

to the impact of basic drives on culture. He founded his functional system on a series of drives which he called the 'basic needs of man.' In the sociological field a similar point of view was expressed by Sumner and Keller (1927), who founded their sociological system on a number of universal drives. More recently, largely from the stimulus of psychoanalysis and behavioristic psychology, the study of culture from the point of view of drives (primary and secondary) has received notable expression in the works of—to mention a few—Miller and Dollard (1941), Ford (1945), Whiting (1941), Murdock (1945), Mead (1935), Benedict (1934), Linton (1945), Gorer (1938), and DuBois (1944). None of these, or other workers, however, has dealt with a society in which the drive of hunger is so constantly frustrated as to have become the dominant motivating force in shaping habit and custom. Siriono society seems, clearly, to be such a society."

"Actually psychologists are not yet agreed as to the differences between the secondary drives of appetite and anxiety. A satisfactory definition of and a distinction between these two concepts, though potentially of great value in a systematic analysis of culture and human behavior, has yet to be developed. Recently staff members (13) at

13. These definitions were developed by Dr. I. Child, Dr. John W.M. Whiting, and Dr. Clellan S. Ford. They have not been published as yet.

the Institute of Human Relations, Yale University, have proposed the following definitions.

Appetite is a secondary drive whose motivating response is anticipatory and whose original response is a parasympathetic response which occurred just prior to or during the goal act of a given drive.

Anxiety is a secondary drive whose motivating response is anticipatory and whose original response is a sympathetic response which occurred just prior to or during the goal act of a given drive.

In the above definitions, the distinction between appetite and anxiety, although both are anticipatory responses, rests on the assumption that in the case of the former the original response arises in the parasympathetic nervous system, while in the case of the latter it arises in the sympathetic nervous system. This is essentially the position taken by Mowrer (1940), who has dealt at some length with the problem of anxiety. It is doubtful, however, whether this distinction is of much practical utility in the analysis of cultural behavior. In the case of the Siriono data the important fact to consider is that there are strong anticipatory responses toward food. Some of these may be purely appetitive responses, others anxiety responses, and still others a combination of both. These anticipatory responses result, moreover, not from a single factor, but from a combination of all the factors listed above. "

"Indeed, if the psychoanalysts are correct in their interpretations of behavior in our own society, the situation found among the Siriono is in many respects reverse. While the strongest secondary drives and anxieties in our own society arise from sex frustration, among the Siriono they may arise [97] from hunger frustration, and while food often compensates for sex deprivation in our own society, among the Siriono love appears frequently to serve as a compensation for hunger. Hence it would seem unsafe to generalize the findings of psychoanalysis, based on data from our own society, to other societies where drive conditions are not comparable."

"By way of recapitulation and conclusion a number of generalizations are suggested for further refinement and investigation in other societies where conditions of food insecurity and hunger frustration are comparable to those found among the Siriono.

(1) Such societies will be characterized by a general backwardness of culture. A concern with food problems will so dominate the society that other aspects of its culture will be little developed.

(2) The primary drive of hunger will dominate all other basic drives.

(3) The sex drive will be mobilized principally through the drive of hunger.

(4) The food quest will be painful and fatiguing.

(5) Secondary drives generally will be little elaborated.

(6) The strongest secondary drives will be those based on the primary drive of hunger.

(7) Appetites for eating will be strong.

(8) Anxieties about food will be intense.

(9) Aggression will be expressed largely in terms of food; if not, such aggression will be so severely punished that it will be almost entirely repressed.

(10) Prestige will be gained and status maintained largely by food-getting activities.

(11) Positions of power and authority will be occupied by individuals who are the best providers of food.

(12) Etiquette and ritual with respect to food will either be lacking or it will be

elaborated to a pronounced degree.

(13) Fantasies and dreams about food will be common; if not, the subject of food will be so [99] repressed that food will not appear as a symbol in dreams.

(14) Magical practice will be devoted principally to increasing and insuring the supply of food.

(15) The most rewarding behavior in the society will be that which reinforces the hunger drive.

(16) There will be a tendency to kill, abandon, neglect, or otherwise dispose of the aged, the deformed young, and the extremely ill. If not, such dependents will occupy a favored status in the society.

(17) Kin groups will be more cohesive than all other social groups and will perform a greater number of significant functions than local or other internal social groups."